patients, implanted with a non-rechargeable device (Kinetra™, Soletra™, Itrel®2) between 1996 and 2010. Overall, 117 implantations were performed (primo-implantation and replacement). The mediane time to replacement of the non-rechargeable devices was 2.9 years, ranging between 0.4 and 7.8 years. When extrapolated to the cohort population, the use of the rechargeable device would have avoided a total number of 215 hospitalizations over 9 years. The number of days of hospitalization avoided per patient was 10 days. The direct medical cost (device and hospitalization tariffs) avoided per patient was 27 886€. **CONCLUSIONS:** Over 9 years, the rechargeable DBS device allows to avoid 2 device replacements per patient. This is associated with a 40 % reduction of the total number of days in hospital, and 43% reduction in the direct medical cost. The rechargeable neurostimulator Activa®RC is adapted to patients with high energy needs like dystonia patients, with a time to replacement of 5 years or less.

PMD21

THE CLINICAL AND ECONOMIC BENEFITS OF SPINAL CORD STIMULATION IN THE TREATMENT OF FAILED BACK SURGERY SYNDROME (PRECISE STUDY)

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OBJECTIVES: PRECISE study aims to assess the costs and the clinical benefits of Spinal Cord Stimulation (SCS) (plus conventional medical management, CMM) in the treatment of Failed Back Surgery Syndrome (FBSS) patients not adequately responding to CMM alone. Being the study closed, we report the preliminary clinical and resource consumption final results. **METHODS:** An observational, pre-post data collection with a 24-months follow-up (FU) was developed in 9 Italian Hospitals. Resource consumption, clinical outcomes (Pain Numerical Rating Scale - NRS, Oswestry Disability Index - ODI) and HR-QoL data (SF-36, EQ-5D) were collected before and after the SCS system implantation in order to be compared. **RESULTS:** Fifty-five of the 72 patients implanted (out of the 80 enrolled for the SCS screening) completed the study. Seventeen discontinued the therapy due to: consent withdrawal (24%), loss to FU (24%), SCS-related issues (29%), non-SCS related reasons (24%). Mean pain intensity decreased from 7.4±1.4 to 4.2±2.6 in the first 12 months, remaining consistent through the second year of FU (4.1±2.5). A continuous improvement in function measured with ODI was appreciated: 47 (85%) patients improved in the first year and 33 (60%) during the second, for a total of 41 (82%) patients improved at 24-month FU if compared to the baseline. EQ-VAS increased from 37 to 60 (12-months) to 63 (24-months). All SF-36 domains significantly improved, and especially "Bodily Pain", "Social Functioning", "Role Emotional". With respect to the baseline, the monthly per-patient resource consumption decreased: considering the second year of follow-up, both pain-related hospitalizations and GP visits experienced a 70% reduction in number, diagnostic exams diminished by the 82%. Monthly caregivers' days off from work dropped by the 80% (from 45 to 9). **CONCLUSIONS:** SCS allows a better and sustained pain control and HR-QoL improvement. If compared with CMM alone, SCS permits a reduction in resource consumption and productivity losses.

PMD22

ECONOMIC EVALUATION OF AMINO-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE (NT-PROBNP) TEST IN PATIENTS WITH DYSPNEA ATTENDING TO EMERGENCY DEPARTMENT (ED) IN SPAIN

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OBJECTIVES: Diagnosis of patients with dyspnea and suspected acute heart failure (HF) using NT-proBNP testing has been studied internationally. We aimed to analyze the efficiency of NT-proBNP compared to standard clinical evaluation alone use in Spanish Emergency Departments. **METHODS:** A decision-analytic model was developed to evaluate the clinical and economic outcomes of both diagnostic alternatives. Model's time horizon started at patient ED visits and ended after 60 days of follow-up (taking into account differences between hospitalized and non-hospitalized patients). Clinical parameters were mainly extracted from the PRIDE study and were validated by expert opinion (ED and cardiology doctors). We assumed that 65% of patients with dyspnea had HF based on Spanish published data. Resource use was obtained through expert opinion and examined under a National Healthcare System (NHS) perspective. We considered a 900 pg/ml cut-point for NT-proBNP test (sensitivity of 90% and specificity of 85%). Our model compared final diagnostic result with the initial diagnostic before ED discharge. A probabilistic sensitivity analysis was carried out in order to handle uncertainty. **RESULTS:** Diagnosis using NT-proBNP testing was correct in 91.96% of patients (59.09% true positive cases and 32.87% true negative cases) versus 85.53% with the standard clinical evaluation alone (50.79% of true positive cases and 34.74% of true negative cases). Besides, NT-proBNP testing involved less costs (4,045€ versus 5,405€) mainly due to less hospitalizations and a shorter length of stay. Robustness of results was confirmed through a sensitivity analysis. **CONCLUSIONS:** NT-proBNP test is less costly per correctly diagnosed patient than standard clinical evaluation alone in the assessment and management of patients with dyspnea at ED rooms from Spanish NHS perspective.

PMD23

CHARACTERIZATION OF FOCAL LIVER LESIONS BY CONTRAST-ENHANCED ULTRASOUND IN THE NETHERLANDS: AN ECONOMIC EVALUATION

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OBJECTIVES: Liver imaging techniques aim to correctly characterize focal lesions and influence choices of therapeutic strategies. The objective of this study was to compare diagnostic efficacy and direct medical costs of contrast-enhanced ultrasound (CEUS) to magnetic resonance imaging (MRI) or computed tomography (CT) in the characterization of focal liver lesions in the The Netherlands. **METHODS:** This prospective study enrolled 170 patients at an academic hospital in the The Netherlands. A decision model was designed to compare two diagnostic algorithms based on the results of the study: 1) a typical patient work-up, which included ultrasound (US), followed by an MRI or CT examination, and 2) a new patient work-up in which CEUS was performed after US. The perspective of the healthcare sector in the The Netherlands was used. Clinical outcomes were 'correctly characterizedx benign and malignant liver lesions and life-years (LY). Model inputs were taken from the hospital database, literature and publicly available sources. Time horizon was two years. One-way and probabilistic sensitivity analyses were performed to assess uncertainty in the results. **RESULTS:** CEUS was able to identify benign and malignant focal liver lesions with a sensitivity of 96.9% and specificity of 92.3%. For correct tumor subgroup characterization, sensitivity and specificity were 86.2% and 85.6% respectively. Base-case results revealed that the CEUS strategy had similar effectiveness compared to the MRI/CT strategy (incremental effects of 0.002 LYs) and resulted in cost-savings of €452. The cost-savings for diagnostic phase and treatment phase were €160 and €292 respectively. The results were sensitive to specificity, sensitivity and cost of the diagnostic tests. Robustness of the results was confirmed by probabilistic sensitivity analysis. **CONCLUSIONS:** This study demonstrates that CEUS is a cost-saving alternative compared to the traditional diagnostic procedures and should be considered as one of the 'first stepx options in the front-line characterization of focal liver lesions in the The Netherlands.

PMD24

COST-EFFETIVENESS OF 3M ™ COBAN 2 ™ COMPRESSION SYSTEM IN THE TREATMENT OF LYMPHOEDEMA

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OBJECTIVES: The treatment of chronic lymphoedema (CL) is of particular health economic interest since, due to its chronic nature and continuous need for treatment, it is associated with high costs and considerable patient burden. The objective of this study was to assess the cost-effectiveness of 3M™ Coban 2™ compression system in the treatment of CL compared to Comprilan® short-stretch bandage compression therapy. **METHODS:** In the UK and the United States a multi-center, prospective, open-label study was conducted, including patients with CL of the legs (n=40) and the arms (n=42). Patients were randomly assigned to the four treatment arms (3M™ Coban 2™ compression treatment either daily, 2x/wk or 3x/wk, and daily compression therapy with Comprilan® bandages). Cost analysis from the UK payors' perspective was based on material costs and personal resource utilization for bandage changes and for manual lymphtherapy. Clinical outcomes in the cost-effectiveness analysis was defined as mean volume reduction at the end of therapy (19 days). **RESULTS:** On average, 3 weeks treatment for a patient with lymphoedema added to 1,297.96 € for the health service comissioners and up to 576,54 € for the physiotherapists across all groups. Lymphoedema treatment with 3M™ Coban 2™ compression system twice a week was more cost-effective than the other treatments (ICER 37.65 € per % reduction of circumference vs. 146.60 € (daily), 145.67 € (3x/wk) and 147.53 € (daily compression therapy with Comprilan® bandages)). Results were comparable for patients with CL of the upper and lower extremities, respecitvely. Sensitivity analysis provided stable results after variation of costs, utilization rates and clinical outcomes. **CONCLUSIONS:** Treatment of lymphoedema with 3M™ Coban 2™ compression system twice a week is more efficient than treatments applied daily or three times per week.

PMD25

COST-EFFECTIVENESS OF TRANSCATHETER AORTIC VALVE IMPLANTATION (TAVI) IN HIGH-RISK OR INOPERABLE PATIENTS WITH SYMPTOMATIC AORTIC VALVE STENOSIS IN SPAIN

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OBJECTIVES: Transcatheter aortic valve implantation (TAVI) represents an innovative technology superior to medical management (PARTNER study, US) in inoperable patients with severe aortic valve stenosis (AVS). This study aims to estimate the cost-effectiveness of TAVI compared to conservative medical management in symptomatic AVS patients in Spain. **METHODS:** A economic longitudinal cohort model was used to predict clinical and economic outcomes of symptomatic AVS patients treated with either transapical (TA) or transfemoral (TF) TAVI, or medical management alone (MEDICAL). Clinical model input data for TAVI was derived from the real-world SOURCE registry, and for MEDICAL from literature and a registry of 60 untreated Spanish AVS patients followed up for 336 days. Health utilities as well as resource use and unit costs utilized for modelling are representative for Spain. Missing information was substituted by expert estimates. Economic results